

WHAT IS CLAIMED IS:

1. A polyester powder coating material comprising
  - A) 0.5 - 25% by weight of one or more polyureas,
  - B) 50 - 90% by weight of one or more COOH-containing polyesters comprising polymerized units of one or more polyols, and one or more polycarboxylic acids, esters of polycarboxylic acids, or anhydrides of polycarboxylic acids, having a COOH number of 15 to 150 mg KOH/g, and wherein the COOH-containing polyester comprises
    - B1) 40 - 80% by weight of at least one amorphous polyester, based on the weight of the COOH-containing polyester and
    - B2) 20 - 60% by weight of at least one (semi)crystalline polyester based on the weight of the COOH-containing polyester,
  - C) 1 - 25% by weight of at least one of a polyepoxy crosslinker or a polyhydroxyalkylamide crosslinker having a functionality of at least 2, wherein from 0.6 to 1.2 reactive crosslinker groups are present per COOH group of the polyester, and wherein % by weight for A), B) and C) is based on the total weight of the coating material.
2. The polyester powder coating material as claimed in claim 1, further comprising 1 - 50% by weight of one or more auxiliaries or additives.
3. The polyester powder coating material as claimed in claim 1, wherein the polyurea A) comprises polymerized units of at least one difunctional isocyanate and at least one amine having a functionality of at least 2, and has an NCO/NH<sub>2</sub> ratio of from 0.9 to 1.1:1.
4. The polyester powder coating material as claimed in claim 3, wherein the polyurea comprises polymerized units of an isocyanate, an isocyanurate or both an isocyanate and an isocyanurate.
5. The polyester powder coating material as claimed in claim 4, wherein the isocyanate or isocyanurate is selected from the group consisting of IPDI, HDI and HMDI.
6. The polyester powder coating material as claimed in claim 1, wherein the polyurea comprises polymerized units of one or more selected from the group consisting of an

aliphatic amine, a (cyclo)aliphatic amine, a cycloaliphatic amine, an aromatic diamine and a polyamine, having 5 to 18 carbon atoms.

7. The polyester powder coating material as claimed in claim 1, comprising IPD.

8. The polyester powder coating material as claimed in claim 1, comprising 3 to 15% by weight of the polyurea.

9. The polyester powder coating material as claimed in claim 1, wherein the COOH-containing polyester comprises

B1) 60 – 70% by weight of at least one amorphous polyester and

B2) 30 – 40% by weight of at least one (semi)crystalline polyester.

10. The polyester powder coating material as claimed in claim 1, wherein the amorphous polyester B1) has a functionality of from 2.0 to 5.0, a COOH number of from 5 to 150 mg KOH/g, a melting range of 60 to 110°C and a glass transition temperature of from 35 to 85°C.

11. The polyester powder coating material as claimed in claim 10, wherein the polyester B1) comprises polymerized units of one or more selected from the group consisting of isophthalic acid, phthalic acid, adipic acid, azelaic acid, sebacic acid, dodecanedioic acid, trimellitic acid, hexahydro-terephthalic acid, hexahydrophthalic acid, succinic acid and 1,4-cyclohexanedicarboxylic acid.

12. The polyester powder coating material as claimed in claim 10, wherein the amorphous polyester comprises polymerized units of at least one of a linear diol, an aliphatic diol or a cycloaliphatic diol, in an amount of at least 80 mol%, based on the total amount of polyols.

13. The polyester powder coating material as claimed in claim 12, comprising polymerized units of at least one of monoethylene glycol, diethylene glycol, neopentylglycol hydroxypivalate, neopentylglycol, cyclohexanedimethanol, butane-1,4-diol, pentane-1,5-diol, pentane-1,2-diol, hexane-1,6-diol, or nonane-1,9-diol.

14. The polyester powder coating material as claimed in claim 12, comprising not more than 20 mol% of branched, aliphatic or cycloaliphatic polyols.

15. The polyester powder coating material as claimed in claim 1, wherein the (semi)crystalline polyester B2) has a functionality of from 2.0 to 4.0, a COOH number of from 5 to 150 mg KOH/g, a melting point of from 60 to 130°C, and a glass transition temperature < -10 °C.

16. The polyester powder coating material as claimed in claim 15, wherein the (semi)crystalline polyester B2) comprises polymerized units of one or more selected from the group consisting of succinic acid, adipic acid, sebacic acid, and dodecanedioic acid in an amount of at least 85%, based on the total amount of all carboxylic acids.

17. The polyester powder coating material as claimed in claim 16, comprising not more than 15 mol% of other aliphatic, cycloaliphatic or aromatic dicarboxylic acids.

18. The polyester powder coating material as claimed in claim 17, comprising one or more of glutaric acid; azelaic acid; 1,4-, 1,3- or 1,2-cyclohexanedicarboxylic acid; terephthalic acid; or isophthalic acid.

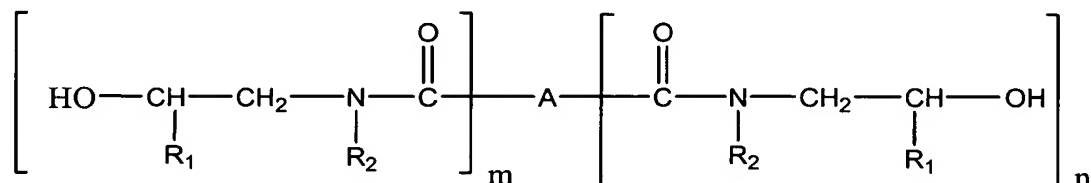
19. The polyester powder coating material as claimed in claim 15, comprising polymerized units of at least one of monoethylene glycol, butane-1,4-diol or hexane-1,6-diol in an amount of at least 80 mol%, based on the total amount of all polyols.

20. The polyester powder coating material as claimed in claim 19, comprising not more than 20 mol% of any combination of aliphatic, cycloaliphatic, or linear branched polyols.

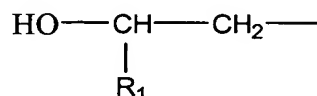
21. The polyester powder coating material as claimed in claim 20, comprising one or more of diethylene glycol, neopentylglycol hydroxypivalate, neopentylglycol, cyclohexane-dimethanol, pentane-1,5-diol, pentane-1,2-diol, nonane-1,9-diol, trimethylolpropane, glycerol or pentaerythritol.

22. The polyester powder coating material as claimed in claim 1, wherein the crosslinker comprises one or more of TGIC, a compound of TGIC or a  $\beta$ -hydroxyalkylamide.

23. The polyester powder coating material as claimed in claim 22, comprising one or more  $\beta$ -hydroxyalkylamides of the formula



where  $\text{R}_1$  is hydrogen, an aromatic radical or a  $\text{C}_1$ - $\text{C}_5$  alkyl group,  $\text{R}_2$  is hydrogen, an aromatic radical, a  $\text{C}_1$ - $\text{C}_5$  alkyl group or



and A is a chemical bond or a monovalent or polyvalent organic group selected from saturated, unsaturated, and aromatic hydrocarbon groups or substituted hydrocarbon groups having from 2 to 20 carbon atoms, m is 1 to 2, n is 0 to 2, and m + n is at least 1.

24. The polyester powder coating material as claimed in claim 23, comprising 2 to 10% by weight of a  $\beta$ -hydroxyalkylamide.

25. A coating comprising the polyester powder coating material of Claim 1 and one or more pigments or fillers.

26. A coating obtained by applying the polyester powder coating material of Claim 1, onto a substrate.